AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous listings, and versions, of the claims in the application:

1-62. Withdrawn.

63. (Currently Amended) An intracellular recognition molecule R, comprising a proteinaceous recognition domain, conformationally constrained by covalent bonding to a platform,

said recognition molecule R ~~having the capacity to~~ specifically interact**ing**, within a cell, with a site on a predetermined intracellular target molecule T, the interaction with T occurring with an affinity corresponding to a K_d value of less than or equal to $5x10^{-9}$ M,

wherein said intracellular recognition molecule R is a peptide aptamer,

wherein said platform is thioredoxin (TRX) or a TRX-like protein, and

wherein the proteinaceous recognition domain consists of a peptide having a length of five to sixty amino acids

64. (Currently Amended) The intracellular recognition molecule R according to claim 63 wherein the recognition domain ~~comprises or~~ consists of a peptide having a length of ~~five to sixty amino acids, preferably~~ ten to forty amino acids.

65. (Currently Amended) The intracellular recognition molecule R according to claim 64 wherein the peptide recognition domain comprises a random peptide.

66. (Cancelled).

67. (Currently Amended) The intracellular recognition molecule R according to claim 64 ~~or 66~~, wherein the platform is heterologous with respect to the recognition domain.

68. (Cancelled).

69. (Currently Amended) The intracellular recognition molecule according to ~~any one of claims~~ claim 63 ~~to 69~~, wherein the affinity of the interaction with T corresponds to a K_d value comprised between $1x10^{-9}$ M and $1x10^{-14}$ M.

70. (Currently Amended) The intracellular recognition molecule according to ~~any one of claims~~ claim 63 ~~to 69~~, wherein the intracellular target molecule T with which R ~~has the capacity to~~ specifically interacts is chosen from a cyclin-dependent kinase, a pro-apoptotic protein.

71. (Currently Amended) The intracellular recognition molecule according to claim 70 wherein the intracellular target molecule T is Cdk2.

72. (Currently Amended) The intracellular recognition molecule according to claim 71 wherein the peptide recognition domain comprises ~~or consists of~~ a mutant of the amino acid sequence QVWSLWALGWRWLRRYGWNM (SEQ ID NO: 1), said mutant having from ~~one to five, preferably~~ one to three amino acid changes with respect to said sequence.

73. (Currently Amended) The intracellular recognition molecule according to claim 72 wherein the peptide recognition domain comprises ~~or consists of~~ the amino acid sequence QVWSSWALGWRWLRRYGWGM (SEQ ID NO: 2).

74. (Currently Amended) The intracellular recognition molecule according to claim 70 wherein the intracellular target molecule T is Bax.

75. (Currently Amended) The intracellular recognition molecule according to claim 74 wherein the peptide recognition domain comprises ~~or consists of~~ a mutant of the amino acid sequence PRGAPMWMRWVCQMLETMFL (SEQ ID NO: 3), said mutant having from ~~one to five, preferably~~ one to three amino acid changes with respect to said sequence.

76. (Currently Amended) The intracellular recognition molecule according to claim ~~72~~ 75 wherein the peptide recognition domain comprises ~~or consists of~~ the amino acid sequence PRGAPMWLRCVCQMLETKFL (SEQ ID NO: 4).

77. (Currently Amended) An oligomeric intracellular recognition molecule, comprising from two to four intracellular recognition molecules R, each of which being an intracellular recognition molecule according to claim 63, said recognition molecules being covalently linked to each other, either directly or via a linker.

78. (Currently Amended) The oligomeric intracellular recognition molecule according to claim 77 comprising two intracellular recognition molecules R.

79. (Currently Amended) A dimeric intracellular recognition molecule, comprising two covalently linked intracellular recognition molecules R1 and R2, wherein R1 and R2 each comprise a recognition domain V, V being a peptide having a length of five to sixty amino acids, conformationally constrained by covalent bonding to a platform, R1 having the capacity to specifically interact, within a cell, with a site on a predetermined intracellular target molecule T1, and R2 having the capacity to specifically interact, within a cell, with a site on a predetermined intracellular target molecule T2, wherein R1 and R2 may be the same or different and T1 and T2 are distinct.

80. (Currently Amended) The dimeric intracellular recognition molecule according to claim 79, wherein R1 and R2 are identical, and the intracellular recognition molecule specifically and simultaneously binds to two identical but separate target molecules T1 and T2.

81. (Currently Amended) The dimeric intracellular recognition molecule according to claim 79, wherein R1 and R2 are different, and the intracellular recognition molecule specifically and simultaneously binds to two different and separate target molecules T1 and T2.

82. (Currently Amended) The dimeric intracellular recognition molecule according to claim 80 or 81, wherein the target molecules T1 and T2 do not detectably interact with each other in a cell in the absence of the recognition molecule.

83. Withdrawn.

84. (New) The intracellular recognition molecule R according to claim 63, wherein the recognition domain consists of 20 amino acids.